

REMARKS

Claims 1-56 are currently pending. The amendment of claims 1, 12, 23, 33, 37, 49, and 53 is supported by page 8, line 23, through page 11, line 7, of the specification as filed. Claims 1, 12-22, and 37 have also been amended for clarification. It is respectfully submitted that no new matter has been added.

The Patent Office is thanked for its indication that claims 6-9, 17-20, 27-30, 34-36, and 42-45 recite patentable subject matter. However, Applicant believes that all currently pending claims are in condition for allowance.

The Patent Office rejected claims 1, 3-5, 10, 12, 14-16, 21, 23, 25, 26, 32, 33, 37, 39-41, 46, and 48-56 under 35 U.S.C. 102(e) as being anticipated by Belotserkovsky, U.S. Patent No. 6,771,591.

For a claim to be anticipated, each and every non-inherent claim limitation must be disclosed in a single reference. MPEP 2131.

All claims have been amended to recite identically or similarly to the following:

suppressing noise jitter in the time domain channel estimates through one of the following techniques: 1) power-normalizing the time domain channel estimates and preserving the time domain channel estimates with power above a predefined threshold and setting a remainder of the time domain channel estimates to zero, 2) ordering the time domain channel estimates by power and accumulating the so-ordered time domain channel estimates from highest power to lowest until a threshold on the accumulated power is met and then setting a remainder of the time domain channel estimates to zero, and 3) preserving the time domain channel estimates at actual channel tap delays and setting a remainder of the time domain channel estimates to zero

Belotserkovsky discloses a method and system for processing orthogonal frequency division multiplexed signals. Figure 8 of Belotserkovsky is disclosed to be a recursive noise reduction system. In Belotserkovsky's system, channel estimate unit 54 sets the value of twelve subcarriers to zero, consistent with the mentioned proposed ETSI and IEEE standards (column 6, lines 11-20). The setting of the subcarriers to zero is performed in the frequency domain as is after the setting to zero of certain subcarriers, Belotserkovsky discloses that the resulting channel estimate is passed to the IFFT unit 58 to transform the frequency domain channel estimate into a time domain channel estimate (column 6, lines 21-24). In the time domain, Belotserkovsky's

“noise reduction unit 64 reduces the additive channel noise contained in the time-domain channel estimate by zeroing out any taps outside of a predetermined ranged **centered around the main channel tap.**”

Belotserkovsky does not disclose or suggest the claimed subject matter of

suppressing noise jitter in the time domain channel estimates through one of the following techniques: 1) power-normalizing the time domain channel estimates and preserving the time domain channel estimates with power above a predefined threshold and setting a remainder of the time domain channel estimates to zero, 2) ordering the time domain channel estimates by power and accumulating the so-ordered time domain channel estimates from highest power to lowest until a threshold on the accumulated power is met and then setting a remainder of the time domain channel estimates to zero, and 3) preserving the time domain channel estimates at actual channel tap delays and setting a remainder of the time domain channel estimates to zero

Thus, Belotserkovsky does not anticipate any of the claims.

The Patent Office rejected claims 2, 11, 13, 22, 24, 31, 38, and 47 under 35 U.S.C. 103(a) as being unpatentable over Belotserkovsky in view of Coleri, “Channel Estimation Techniques Based on Pilot Arrangement in OFDM Systems,” IEEE Transactions on Broadcasting, vol. 48, no. 3, September 2002, pp. 223-229.

All claims have been amended to recite identically or similar to the following:

suppressing noise jitter in the time domain channel estimates through one of the following techniques: 1) power-normalizing the time domain channel estimates and preserving the time domain channel estimates with power above a predefined threshold and setting a remainder of the time domain channel estimates to zero, 2) ordering the time domain channel estimates by power and accumulating the so-ordered time domain channel estimates from highest power to lowest until a threshold on the accumulated power is met and then setting a remainder of the time domain channel estimates to zero, and 3) preserving the time domain channel estimates at actual channel tap delays and setting a remainder of the time domain channel estimates to zero

Coleri has been cited as teaching “the channel estimation is based on minimum mean-squared error (MMSE) estimation over comb-type pilot signals.”

Coleri discloses an OFDM system based on pilot channel estimation (page 223, right hand column, last two lines). After inserting pilots, the IDFT block changes the data sequence to

the time domain, guard time is inserted, and the time domain signal is transmitted (page 224, left hand column). Coleri does not disclose time domain channel estimate processing such as power-normalizing, ordering channel estimates by power, or preserving channel estimates corresponding to actual channel taps. Thus, Coleri does not remedy the deficiencies of Belotserkovsky.

So, claims 2, 11, 13, 22, 24, 31, 38, and 47 are allowable over Belotserkovsky in view of Coleri.

It is respectfully submitted that the rejections of claims 1, 3-5, 10, 12, 14-16, 21, 23, 25, 26, 32, 33, 37, 39-41, 46, and 48-56 under 35 U.S.C. 102(e) based on Belotserkovsky and of claims 2, 11, 13, 22, 24, 31, 38 and 47 under 35 U.S.C. 103(a) based on Belotserkovsky in view of Coleri have been overcome, and respectfully requested that the Patent Office reconsider and remove the rejections of these claims. The Patent Office is respectfully requested to favorably consider and allow all of the pending claims 1-56 as now presented for examination. An early notification of the allowability of claims 1-56 is earnestly solicited.

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Respectfully submitted:

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